

SPECIFICATION AMENDMENTS

In the paragraph starting at line 33 of page 3 and extending to line 33 of page 5, please make the following annotated changes.

By suitable selection of the cold filling pressure of the xenon and the zinc iodide content, the operating voltage of the lamp, that is the voltage drop across the lamp when the lamp is in almost steady-state operation, i.e. once the gas discharge in the discharge vessel has been started and stabilized, is set to a constant value, preferably to 45 volts. In addition, xenon plays a significant role in increasing the efficiency of the light production in the gas discharge. The cold filling pressure of the xenon should therefore be at least 9000 hPa, preferably even at least 11000 hPa, in order to achieve a high luminous flux and thus a high luminous efficiency. As can be seen from figure 2, there is a linear relationship between the cold filling pressure of the xenon and the luminous efficiency. With a cold filling pressure of 9000 hPa, the luminous flux is 2982 lm and the luminous efficiency is 85 lm/W, and with a cold filling pressure of 11000 hPa, the luminous flux is increased to 3112 lm and the luminous efficiency is improved even to 89 lm/W. According to the illustration in figure 2, a cold filling pressure of the xenon which is as high as possible would be desirable. The discharge vessel would also withstand a xenon cold filling pressure of more than 20000 hPa, but if a xenon cold filling pressure of 13000 hPa were to be exceeded, both the operating voltage of the lamp and the color temperature of the light produced in the gas discharge would be altered. In order to reset the color temperature to the desired value, preferably 4000 K, the content of scandium iodide would have to be increased. However, this could lead to the discharge vessel, which is preferably made of silica glass, being damaged, since scandium reacts chemically with quartz. In order, at a relatively high xenon cold filling pressure, to set the operating voltage of the lamp to a predetermined value, preferably 45 volts, the content of zinc iodide is advantageously selected correspondingly. The content of zinc iodide is advantageously less than or equal to 0.10 mg and preferably even less than or equal to 0.05 mg. In the pressure range of the xenon cold filling pressure of 9000 hPa to 13000 hPa the content by weight of zinc iodide is advantageously selected such that the linear relationship $Y = -0.015X + 0.207$ $Y = -1.5 \times 10^{-5}(X) + 0.207$ is approximately satisfied, the variable Y in the abovementioned equation being the numerical value of the zinc iodide content in milligrams [mg], and X being the numerical value of the xenon cold filling pressure in hectopascals [hPa] (figure 3). In addition to the abovementioned filling components, sodium iodide, scandium iodide and indium iodide are also used for

light production in the high-pressure discharge lamps according to the invention. The abovementioned quantity ranges for these filling components are determined by the desired color temperature, preferably 4000 K, and the desired color location of the light produced by the gas discharge. It is necessary to add a comparatively small quantity of indium iodide to produce white light in accordance with the ECE regulation R.99. As shown in figure 4, the color location of the filling in accordance with the preferred exemplary embodiment is within the trapezoid illustrated in figure 4, which defines the color locations of white light which are permissible for light sources of vehicle headlights in accordance with the ECE regulation R.99. If indium iodide were to be dispensed with, although a color temperature of 4000 K may also be achieved, the color location of the light would be outside the trapezoid illustrated in figure 4, and the lamp would therefore no longer be suitable as a vehicle headlamp. In order to keep both the color location and the color temperature in the desired range, the molar ratio of sodium to scandium in the ionizable filling of the lamp according to the invention advantageously has a value of between 3 and 6.

Please replace the paragraph starting at line 33 of page 3 and extending to line 33 of page 5, please make the following clean copy.

By suitable selection of the cold filling pressure of the xenon and the zinc iodide content, the operating voltage of the lamp, that is the voltage drop across the lamp when the lamp is in almost steady-state operation, i.e. once the gas discharge in the discharge vessel has been started and stabilized, is set to a constant value, preferably to 45 volts. In addition, xenon plays a significant role in increasing the efficiency of the light production in the gas discharge. The cold filling pressure of the xenon should therefore be at least 9000 hPa, preferably even at least 11000 hPa, in order to achieve a high luminous flux and thus a high luminous efficiency. As can be seen from figure 2, there is a linear relationship between the cold filling pressure of the xenon and the luminous efficiency. With a cold filling pressure of 9000 hPa, the luminous flux is 2982 lm and the luminous efficiency is 85 lm/W, and with a cold filling pressure of 11000 hPa, the luminous flux is increased to 3112 lm and the luminous efficiency is improved even to 89 lm/W. According to the illustration in figure 2, a cold filling pressure of the xenon which is as high as possible would be desirable. The discharge vessel would also withstand a xenon cold filling pressure of more than 20000 hPa, but if a xenon cold filling pressure of 13000 hPa were to be exceeded, both the operating voltage of the lamp and the color temperature of the light produced in the gas discharge would be altered. In order to reset the color temperature to the desired value, preferably 4000 K, the content of scandium iodide would have to be increased. However, this could lead to the discharge vessel, which is preferably made of silica glass, being damaged, since scandium reacts chemically with quartz. In order, at a relatively high xenon cold filling pressure, to set the operating voltage of the lamp to a predetermined value, preferably 45 volts, the content of zinc iodide is advantageously selected correspondingly. The content of zinc iodide is advantageously less than or equal to 0.10 mg and preferably even less than or equal to 0.05 mg. In the pressure range of the xenon cold filling pressure of 9000 hPa to 13000 hPa the content by weight of zinc iodide is advantageously selected such that the linear relationship $Y = -1.5 \times 10^{-5}(X) + 0.207$ is approximately satisfied, the variable Y in the abovementioned equation being the numerical value of the zinc iodide content in milligrams [mg], and X being the numerical value of the xenon cold filling pressure in hectopascals [hPa] (figure 3). In addition to the abovementioned filling components, sodium iodide, scandium iodide and indium iodide are also used for light production in the high-pressure discharge lamps according to the invention. The abovementioned

quantity ranges for these filling components are determined by the desired color temperature, preferably 4000 K, and the desired color location of the light produced by the gas discharge. It is necessary to add a comparatively small quantity of indium iodide to produce white light in accordance with the ECE regulation R.99. As shown in figure 4, the color location of the filling in accordance with the preferred exemplary embodiment is within the trapezoid illustrated in figure 4, which defines the color locations of white light which are permissible for light sources of vehicle headlights in accordance with the ECE regulation R.99. If indium iodide were to be dispensed with, although a color temperature of 4000 K may also be achieved, the color location of the light would be outside the trapezoid illustrated in figure 4, and the lamp would therefore no longer be suitable as a vehicle headlamp. In order to keep both the color location and the color temperature in the desired range, the molar ratio of sodium to scandium in the ionizable filling of the lamp according to the invention advantageously has a value of between 3 and 6.